

RAILROAD COMMISSION OF TEXAS

Online Research Queries and the GIS Map Viewer



Mark Maddox



GIS Mapping History



As part of its mandate to regulate the drilling and production of the oil and gas industry in Texas, the RRC maintains maps showing historical, current, and proposed well locations. In the past, manually drawn maps were used. The hardcopy maps became worn and overcrowded with handwritten data. In most cases, copies could not be made for the public because the base maps were copyrighted.

1984 - The RRC began building its computerized well location mapping system.

1994 - The base map and original Texas land survey data layers were completed.

1995 - The well data layer was completed.

1999 - The computerized mapping database was converted to ESRI Arc/Info GIS software.

July 2002, the well data layer contained 1,081,409 wells and/or permitted locations with 680,634 API numbers linked to well locations in the well data layer.

[About Us -](#) [Oil & Gas -](#) [Alternative Fuels -](#) [Gas Services -](#) [Pipeline Safety -](#) [Mining & Exploration -](#) [Legal -](#)

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RRC Closed Memorial Day
 In observance of the Memorial Day holiday, the RRC will be closed on Monday, May 26, 2014.




Railroad Commission
 The Railroad Commission of Texas is committed to the following:

- our stewardship of natural resources
- our concern for personal and public safety
- our support of enhanced development

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Railroad Commissioner David Porter H...
 May 14, 2014

Commissioners

-  Chairman Christi Craddick
-  Commissioner David Porter
-  Commissioner Ryan Sitton

Useful Links

- [What's New at the RRC](#)
- [Data - Online Research Queries](#)
- [Frequently Asked Questions - FAQs](#)
- [Map - Public GIS Viewer](#)

- From the RRC homepage, choose **About Us**
- Select **Resource Center**
- The maps can be found under **Research** select Public GIS Viewer
- Another option is to choose **Maps – Pubic GIS Map Viewer** (from the right hand side bar information on the home page)

Resource Center

The Resource Center provides popular information on:

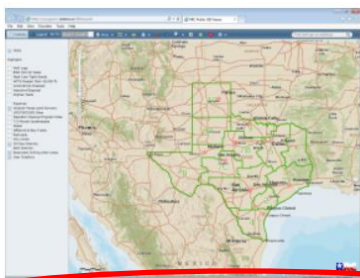
Frequently Asked Questions

- Who Regulates Railroads in Texas?
- Alternative Fuel FAQs
- Gas Services FAQs
- General Frequently Asked Questions
- Mining & Exploration FAQs
- Oil & Gas FAQs
- Oil & Gas Exploration and Surface Ownership
- Pipeline Safety FAQs
- Railroad Commission Authority and Jurisdiction
- Royalties FAQ

Other Internet Sites of Interest

Research

- [Data Sets Available for Purchase](#)
- [Public GIS Viewers \(Maps\)](#)
- [Online Research Queries](#)
- [Publications](#)



Launch Public GIS Viewer

The following training videos provide step-by-step instruction for new features of the Public GIS Viewer. The videos will open in a separate window, allowing you to toggle between the video and viewer. **Note: These videos do not contain audio.**

- [API# or Address Search](#)
- [Survey Search](#)
- [Locating Pipelines](#)
- [Viewing Coordinates](#)

The Public GIS Viewer contains the combined functionality of the Legacy GIS Viewer and the newer appearance of the Enhanced GIS Viewer. In addition, the viewer has been improved with the addition of the following features and is updated nightly.

Screen Overview



1

1- Toolbar
Allows you to access the available tools and features for the GIS viewer

2 -Visibility/Legend Pane
Allows you to toggle between the available layers and the associated legend.

3 -Zoom Control
Allows you to zoom in or out on the map.

4 -Dynamic Coordinates
Displays the coordinates of a location on the map.

5 -RRC Button
Allows you to access the RRC Home page.

6 -Viewing Pane
Displays the map and available layers.

7 -Screen Overview
Allows you to see an overview of the area you are viewing on the map.

Find well api or address

Wells

Highlight:

- ☐ Well Logs
- ☐ EOR H13 Oil Wells
- ☐ High Cost Tight Sands
- ☐ HCTS Deeper than 15,000 ft.
- ☐ Commercial Disposal
- ☐ Injection/Disposal
- ☐ Orphan Wells

Pipelines

- ☒ Original Texas Land Surveys
- ☐ LPG/CNG/LNG Sites
- ☐ Operator Cleanup Program Sites
- ☐ 7.5 Minute Quadrangles
- ☐ Water
- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits
- ☐ District Offices
- ☒ Oil/Gas Districts
- ☐ AED Districts
- ☐ Pipeline Safety Regions
- ☒ Restricted
- ☒ User Groups

0 50 100mi

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japa...

Lat: 34.898541, Long: -115.168193 (WGS 84)

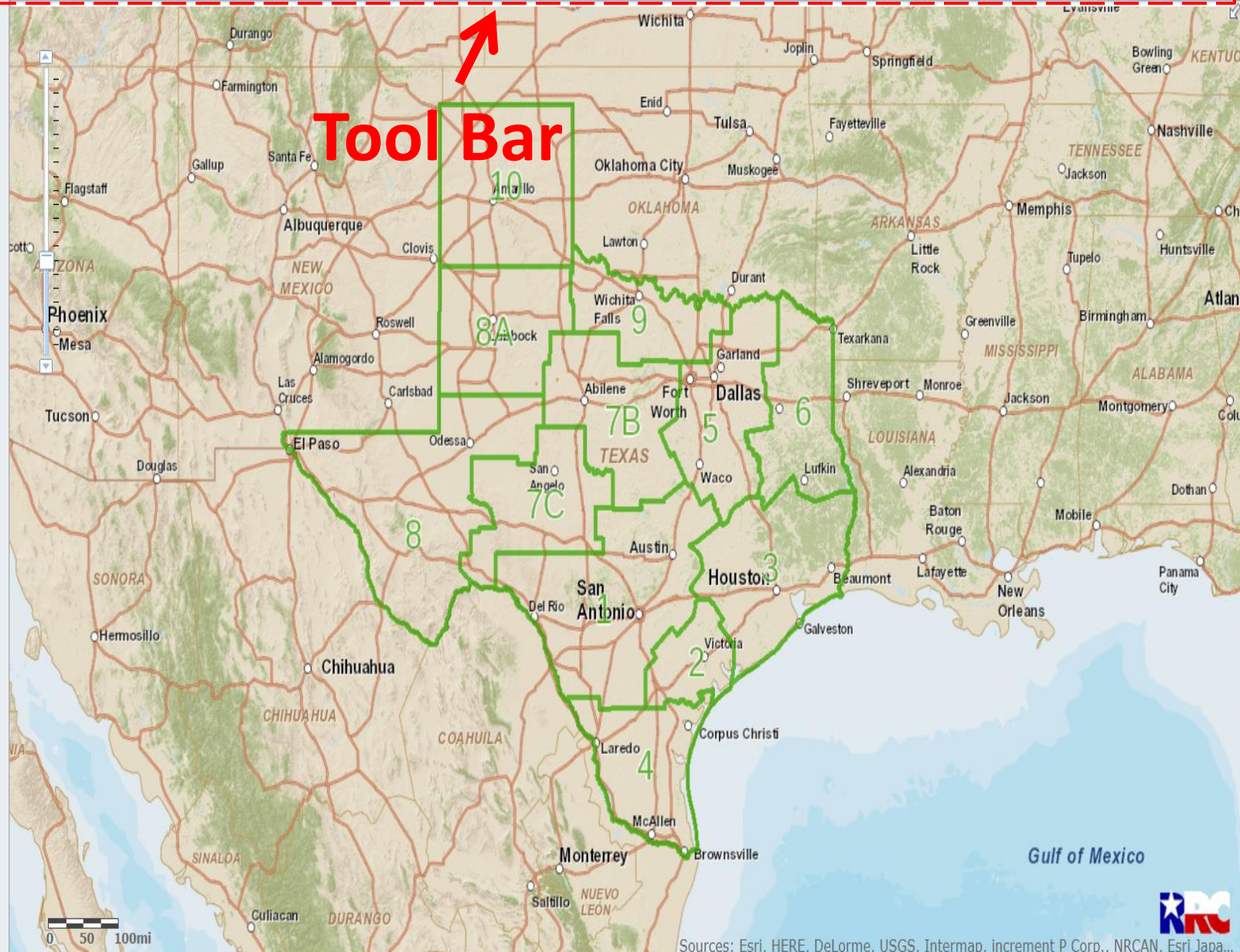
4

☒ Wells

Highlight:

- ☐ Well Logs
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- ☐ HCTS Deeper than 15,000 ft.
- ☐ Commercial Disposal
- ☐ Injection/Disposal
- ☐ Orphan Wells

- ☐ Pipelines
- ☒ Original Texas Land Surveys
- ☐ LPG/CNG/LNG Sites
- ☐ Operator Cleanup Program Sites
- ☐ 7.5 Minute Quadrangles
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- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits
- ☐ District Offices
- ☒ Oil/Gas Districts
- ☐ AED Districts
- ☐ Pipeline Safety Regions
- ☒ Restricted Drilling Alert Areas
- ☒ User Graphics



Tool Bar



Landscape (PDF)
Portrait (PDF)
Landscape (Image)
Portrait (Image)

Measure

Measurement Result

Visibility Legend Go To: 001 ANDERSON

Wells

Highlight:

- ☐ Well Logs
- ☐ EOR H13 Oil Wells
- ☐ High Cost Tight Sands
- ☐ HCTS Deeper than 15,000 ft.
- ☐ Commercial Disposal
- ☐ Orphan Wells

Pipelines

- ☒ Original Texas Land Surveys
- ☐ LPG Sites
- ☐ 7.5 Minute Quadrangles
- ☐ Water
- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits - 2002
- ☒ Restricted Drilling Alert Areas
- ☒ User Graphics

Plugged Storage / Brine Mining

Plugged Storage / Brine Mining / Oil

Plugged Storage / Brine Mining / Gas

Plugged Storage / Brine Mining / Oil / Gas

Horiz/Dir Surface Locations

- ☐ Horizontal Well
- ☐ Directional Well

Horizontal/Directional Lines

Subdivision Labels

Subdivisions

Survey Abstract Labels

Survey Labels

Surveys

Alert Areas

Counties

SELECT COUNTY

001 ANDERSON

003 ANDREWS

005 ANGELINA

007 ARANSAS

009 ARCHER

011 ARMSTRONG

013 ATASCOSA

Switch Basemap

Imagery

Imagery with Labels

Streets

Topographic

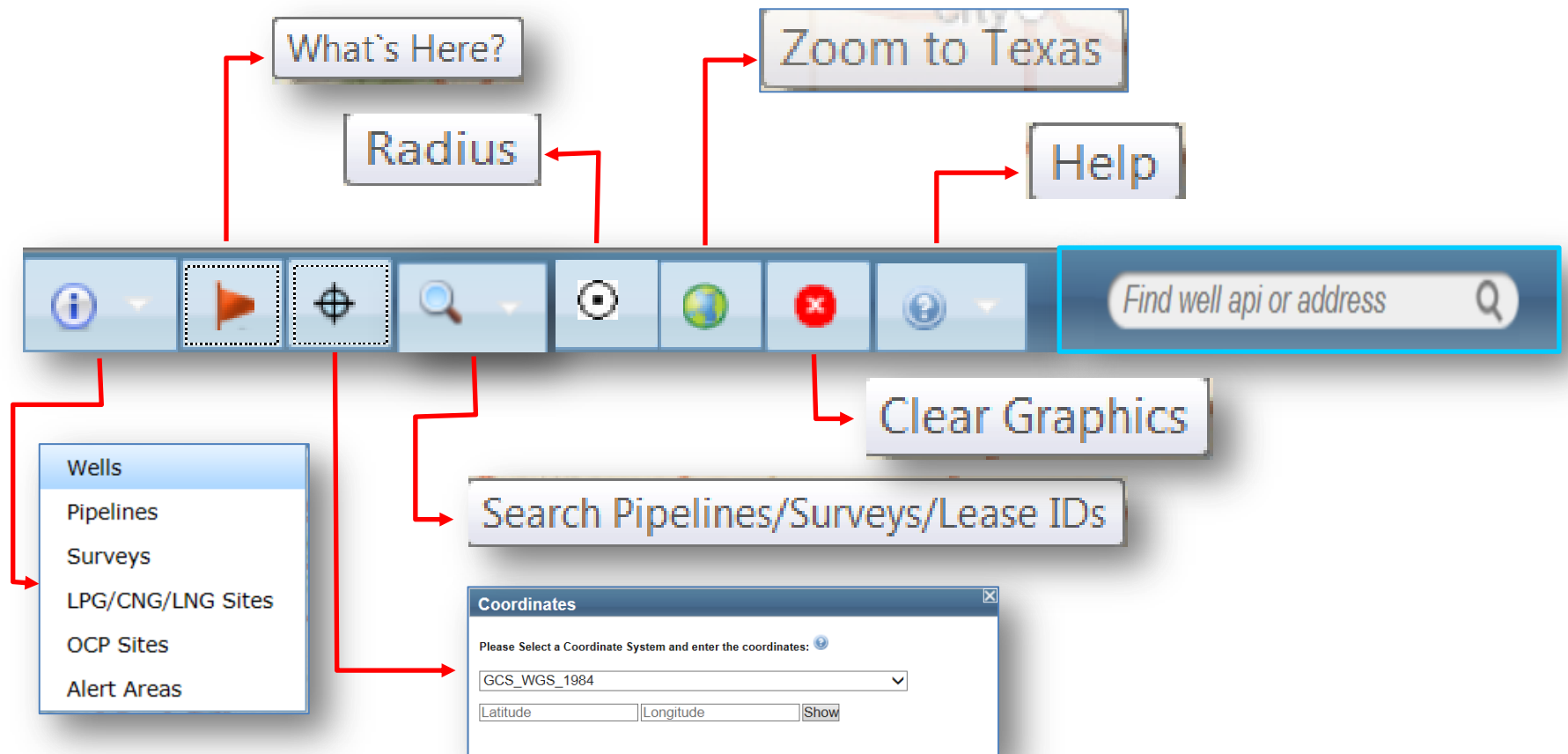
Terrain with Labels

Light Gray Canvas

National Geographic

Oceans

OpenStreetMap



Search By: County

493 WILSON
495 WINKLER
497 WISE
499 WOOD
501 YOAKUM
503 YOUNG
505 ZAPATA

- From the *Go to County/Offshore Area/Bay*
- Left click on the box and go down to the county needed. (**Winkler**)
- Right click on the County name.
- You also can navigate by **typing county name in search engine.**

Winkler County, Texas

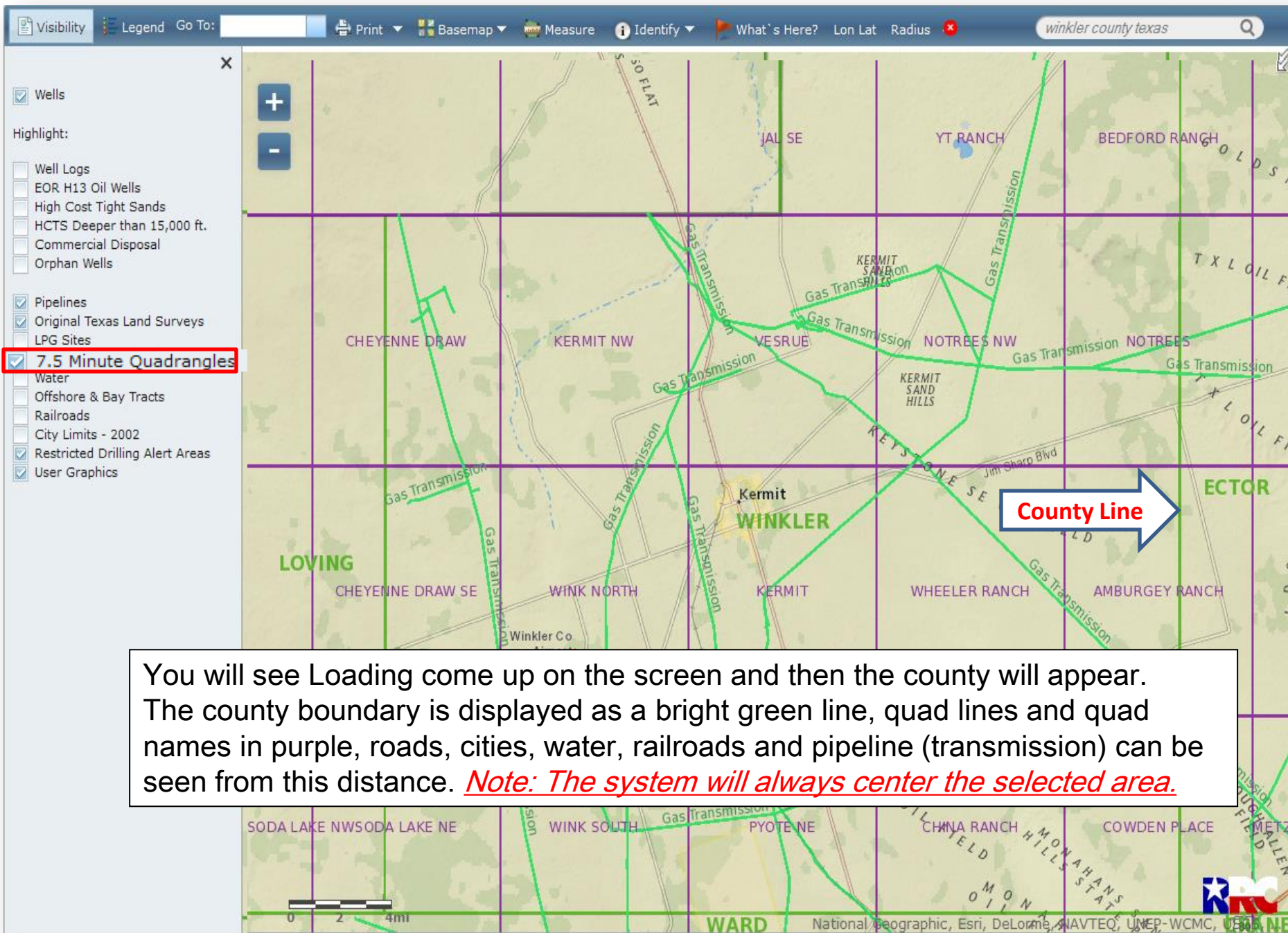
1 San Antonio
2
3 Houston
4 Corpus Christi
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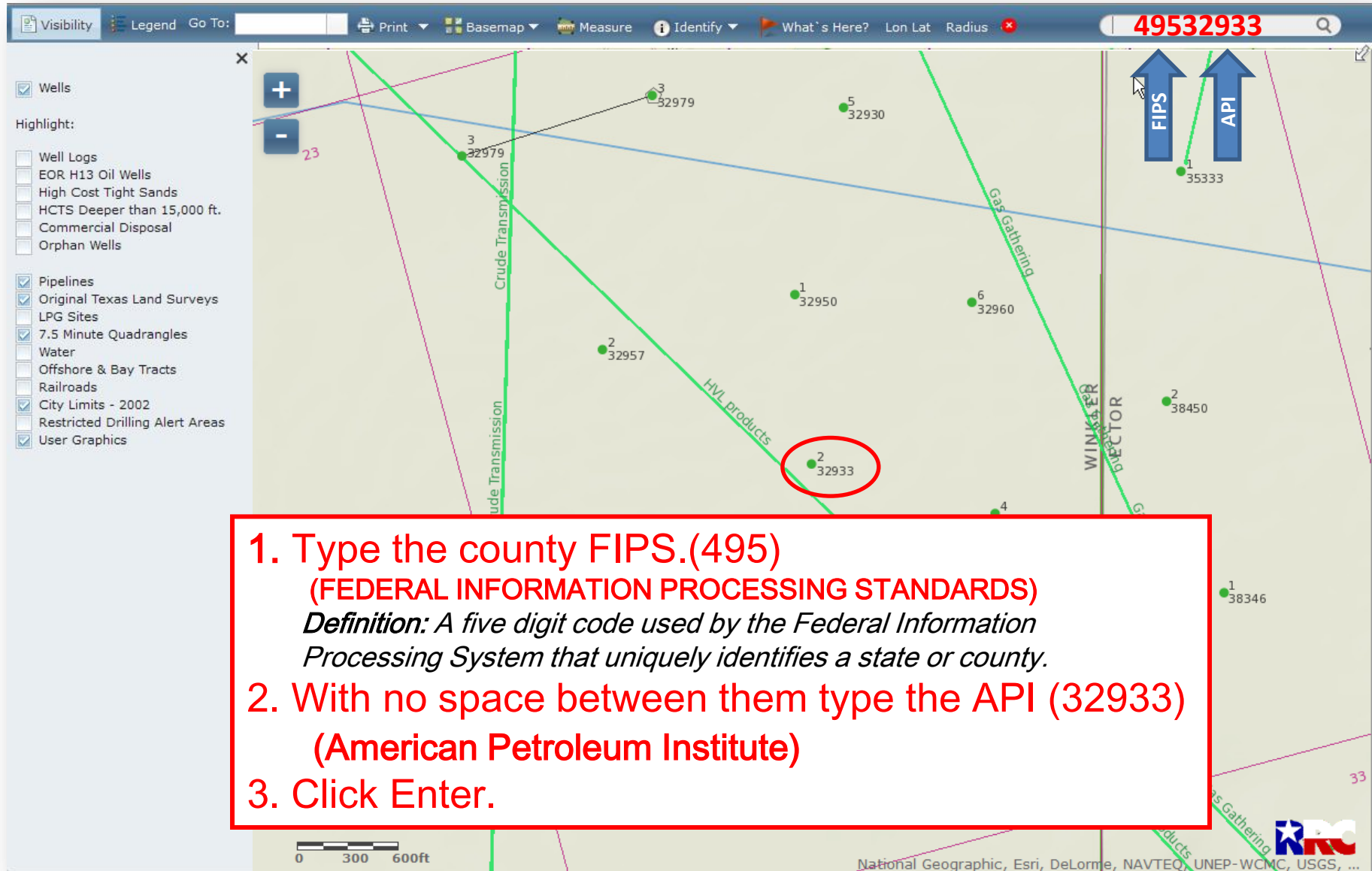
National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, ME...

Winkler County, Texas

Search By: County



Search By: Wellbore API Number



Visibility Tool



The screenshot shows the 'Visibility' tool interface. On the left, a legend pane lists various layers with checkboxes. The 'Well Logs' checkbox is highlighted with a red box. The main map area displays several yellow circular markers with numbers and IDs, representing well logs. A red box highlights the first two steps of the process. A red box at the bottom right contains important notes. A red box at the bottom left contains a note about the color coding of the markers. The bottom of the interface shows a scale bar and a list of data sources.

1. In the toolbar, click the **Visibility** button. The available layers display in the *Visibility/Legend* pane.

2. Click the check box next to the layers that you want to display.

IMPORTANT:

- It may be necessary to zoom in to see the selected layers on the map.
- It may take a few seconds for the selected layers to display.
- Click the **Legend** button to view what each icon represents.

Note: *Well Logs - yellow *High Cost Tight Sands - pink *High Cost Tight Sands greater than 15,000ft designations - blue *Active Commercial Disposals - orange

0 300 600ft

NHD, METI/NASA, Esri, DeLorme, NAVTEQ, USGS, USDA, EPA, Inte...

Basemap Tool



Visibility Legend Go To: Print Basemap Measure Identify What's Here? Lon Lat Radius 49532933

☒ Wells

Highlight:

- ☒ Well Logs
- ☐ EOR H13 Oil Wells
- ☐ High Cost Tight Sands
- ☐ HCTS Deeper than 15,000 ft.
- ☐ Commercial Disposal
- ☐ Orphan Wells

☒ Pipelines

- ☒ Original Texas Land Surveys
- ☐ LPG Sites
- ☐ 7.5 Minute Quadrangles
- ☐ Water
- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits - 2002
- ☒ Restricted Drilling Alert Areas
- ☒ User Graphics

Basemap Tool Interface:

- Imagery (highlighted)
- Imagery with Labels
- Streets
- Topographic
- Dark Gray Canvas
- Light Gray Canvas
- National Geographic
- Oceans
- Terrain with Labels
- OpenStreetMap
- USA Topo Maps
- USGS National Map

Main Map View: Aerial imagery showing land parcels, wells (yellow circles with numbers), and various overlays (green lines, pink dashed lines). A scale bar is visible in the bottom left corner.

Source: Esri Digital Globe, Inc.

NRC

Measure Tool



Note: Coordinates in the "Long:" and "Lat:" boxes will display the coordinates of the location of the cursor on the map as you move it. Long.-102.80391 Lat. 31.9886876



Identify Tool



Identify

- Wells
- Pipelines
- Surveys
- LPG Sites
- Alert Areas

Symbol: Oil Well
API Number: 49532933

IDENTIFY TOOLS

- 1.) Navigate to your area (type in API number 157-32113)
- 2.) Click on the Identify arrow
- 3.) From the drop down box click on **wells**.
- 4.) Place the cursor on the well spot and click.

** The GIS Identify results window will popup.*

GIS Identify Results - Well Location Attributes

API	49532933
GIS WELL NUMBER	2
GIS SYMBOL DESCRIPTION	Oil Well
GIS LOCATION SOURCE	Operator reported location - Distances and Plat
GIS LAT	31.9886876
GIS LONG	-102.8039124
	Well Logs
	Drilling Permits
OPERATOR/WELLBORE	
WELLBORE STATUS	OPEN
LAST PERMIT ISSUED	540139
LAST PERMIT OPERATOR NUMBER	630555
LAST PERMIT OPERATOR	OXY USA WTP LP
LAST PERMIT LEASE NAME	SABRE
TOTAL DEPTH	8580
SURFACE LOCATION	Land
	Oil/Gas Imaged Records for API: 49532933
COMPLETION RECORD	
PRODUCTION SCHEDULE	OIL
DISTRICT	08
LEASEID	37231
OPERATOR NUMBER	630555
OPERATOR	OXY USA WTP LP
LEASE NAME	SABRE
FIELD	ARBOL DE NADA (DEVONIAN)
WELL NUMBER	2
TYPE WELL	PRODUCING
ON SCHEDULE	YES
	Production Data Query(PDQ)
	Oil/Gas Imaged Records for LeaseID: 37231

What's Here? Tool



Visibility Legend Go To: Print Basemap Measure Identify What's Here? Lon Lat Radius 49532933

☒ Wells

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What's Here Results

Longitude: -102.79595 Latitude: 31.98813

QUAD NAME	NOTREES
QUAD NUMBER	3102334
SURVEY NAME	T&P RR CO
BLOCK	46 T1N
SURVEY NUMBER	22
SURVEY NAME 2	COLE, J M C
SURVEY ABSTRACT	A-1237
COUNTY	ECTOR
COUNTY FIPS CODE	135
DISTRICT	08
REGION	2

1.) Click on the **What's Here** tab.

2.) Click on the area you wish to identify.

3.) The GIS What's here results window will popup.

0 0.15 0.3mi

METI/NASA, Esri, DeLorme, NAVTEQ, USGS, USDA, EPA

Coordinates Tool



Visibility Legend Go To: Print Basemap Measure Identify What's Here: Lon Lat Radius 49532933

☒ Wells

Highlight:

- ☐ Well Logs
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- ☐ HCTS Deeper than 15,000 ft.
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- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits - 2002
- ☒ Restricted Drilling Alert Areas
- ☒ User Graphics

Coordinates

Please Select a Coordinate System and enter the coordinates:

GCS_North_American_1927

31.988687 -102.80391 x Show

0 0.15 0.3mi

METI/NASA, Esri, DeLorme, NAVTEQ, USGS, USDA, EPA

1. Click the **Coordinates** button. The *Coordinates* dialog box displays.
2. Using the drop-down list, select the coordinate system you want to use.
3. Enter the coordinates in the fields.
4. Click the **Show** button. The map zooms to the location.

Search Tool



The screenshot shows a web-based map application. On the left, there's a sidebar with "RRC Map" and "Districts" (a green square icon). The main area is a map of Texas with various cities labeled. A search bar at the top right says "Find well api or address". A dropdown menu is open over the map, showing "Pipelines", "Surveys" (highlighted), and "Lease Id". A "Survey Search" dialog box is overlaid on the map. It contains a "Please select a county:" dropdown menu with "SELECT COUNTY" selected. Below this are four text input fields: "ABSTRACT A-" (with "(Ex: 36)" to its right), "SURVEY NAME" (with "(Ex: T&P)" to its right), "BLOCK" (with "(Ex: 40 T2N)" to its right), and "SECTION" (with "(Ex: 19)" to its right). At the bottom of the dialog are "Query" and "Print" buttons. Below the inputs, it says "Query Results: 0".

1. Click **Search | Surveys**. The *Survey Search* dialog box displays.
2. Using the *Select a County* drop-down list, choose the county you want to use in your search. The map zooms to the selected county.
IMPORTANT: You must select a county to run a survey search. If you have selected a county previously, it displays in the field.
3. Complete your search criteria by using entering text into the available fields.
TIP: You can search using partial values in the text fields.
4. Click **Query**. The results display.

Radius Tool



The screenshot displays the Radius Tool interface. The toolbar at the top includes buttons for Visibility, Legend, Go To, Print, Basemap, Measure, Identify, What's Here?, Lon Lat, and Radius. The Radius button is highlighted with a red 'x' icon. The search bar shows the API number 49532933. On the left, the 'Wells' layer is checked, and the 'Highlight' section lists various well types. The 'Radius' dialog box is open, showing 'Buffer Size (miles)' with input fields for .25 and .75. The map shows a large purple circle representing the .75 mile radius and a smaller blue circle representing the .25 mile radius. A text box identifies the center point as 'Symbol: Oil Well API Number: 49532933'. A scale bar at the bottom indicates distances up to 0.3 miles.

Radius
X

Buffer Size (miles) .25 .75

Click Map to Draw Radius

.25 mile radius

.75 mile radius

**Symbol: Oil Well
API Number: 49532933**

0 0.15 0.3m

METI/NASA, Esri, DeLorme, NAVTEQ, USGS, USDA, EPA

1. Click the **Radius** button in the toolbar. The *Radius* dialog box displays.

2. In the *Buffer Size* field, enter the radius distance.

IMPORTANT: Depending on the *Buffer Size* you enter, you may have to zoom in to select a point.

3. In the map, click the location to draw the radius. The radius displays around the point.

Delete Graphics Tool



Visibility Legend Go To: Print Basemap Measure Identify What's Here? Lon Lat Radius 49532933

☒ Wells

Highlight:

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- ☐ High Cost Tight Sands
- ☐ HCTS Deeper than 15,000 ft.
- ☐ Commercial Disposal
- ☐ Orphan Wells

☐ Pipelines

- ☒ Original Texas Land Surveys
- ☐ LPG Sites
- ☐ 7.5 Minute Quadrangles
- ☐ Water
- ☐ Offshore & Bay Tracts
- ☐ Railroads
- ☐ City Limits - 2002
- ☒ Restricted Drilling Alert Areas
- ☒ User Graphics

1.) Click DELETE BUTTON to remove graphics

All of your created graphics will be deleted

The map interface shows a large circular area with a red X over it, indicating deletion. The map displays various geographical features, including wells (green dots with numbers), pipelines (blue lines), and land survey areas (purple lines). A scale bar at the bottom left indicates distances of 0, 0.15, and 0.3 miles. The bottom right corner contains the text "METI/NASA, Esri, DeLorme, NAVTEQ, USGS, USDA, EPA" and a small logo.

Search Window Tool



The screenshot displays the Search Window Tool interface. The top toolbar includes buttons for Visibility, Legend, Go To, Print, Basemap, Measure, Identify, What's Here, Lon Lat, and Radius. A search bar at the top right contains the text "street san antonio tx 78205 us". On the left, a sidebar lists various map layers under "Highlight:", including Wells, Pipelines, Original Texas Land Surveys, LPG Sites, 7.5 Minute Quadrangles, Water, Offshore & Bay Tracts, Railroads, City Limits - 2002, Restricted Drilling Alert Areas, and User Graphics. The main map area shows an aerial view of a city street intersection. A search window is open, displaying the address "101 Bowie St, San Antonio, Texas, 78205". A scale bar at the bottom left indicates distances of 0, 50, and 100 feet. The source information at the bottom right reads "Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Get...".

Find well api or address

101 Bowie St, San Antonio, Texas, 78205

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Get...

For more information contact:

Well Mapping

512-463-6851

Mark Maddox

512-463-1834

Patrick Maxwell

512-463-5289

